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The lichens of the Linnean Herbarium with remarks on Acharian material

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Through the kindness of Dr. B. Daydon Jackson, general secretary of the Linnean Society of London, I had the opportunity from February 12 to 20, 1912, to study the lichens (314 sheets, *fide* Jackson) of the Linnean Herbarium now preserved in Burlington House, London, England.

I have made a critical study only of those species which now fall under the family Usneaceae (plus p. Filamentosi of Linn.), but am listing here all species that can in any sense be considered represented by types. In 1886 Dr. E. Wainio examined the herbarium and published a list of the species (*Revisio Lich. in herb. Linn. asservatorum. Meddel. Soc. pro Fauna et Flora Fenn.* 14: 1-10. 1886). He made no attempt, however, to select types, and I have found a number of important sheets he failed to record, e. g., *L. nivalis*: 3 specimens. Moreover, he did not have the great advantage of Dr. Jackson's* exhaustive study of the Linnean Herbarium, Linneana, and the handwritings of contemporaneous botanists. Dr. Wainio's determinations and mine (in the Usneaceae) agree in the main, and where we differ I have had the kind aid and collaboration of Miss Annie Lorrain Smith, of the British Museum of Natural History, e. g., "1 folio . . . *A. chalybeiformis* Wain." = *A. jubata*.

The sheets referring to *Species Plantarum* (1753) fall naturally into four classes. First, those that have the Sp. Plant. number; the equivalent name in Linnaeus' handwriting; plus the number of his Fl. Suec. (1745). These specimens (in the Usneaceae) represent reliable types, based evidently on Dillenius' *Historia Muscorum*† (1741) and diagnostically described by Linnaeus in Sp. Plant., with correct references to Dillenius' figures, e. g., *L. floridus*.

* Jackson. MS. list Linn. Herb. 1755?, 1-39 [1907]; e Proc. Linn. Soc. 89-126. 1906-1907.

† Crombie. Jour. Linn. 17: 554-556. 1880.

Second, those that have the Sp. Plant. number; the equivalent name in Linnaeus' handwriting; but without a Fl. Suec. number, e. g., *L. vulpinus*. These are for the most part authentic types, yet in some cases they do not agree entirely with Dillenius,* Linnaeus' own descriptions, nor the conception of early post-Linnean authors, e. g., *L. barbatus*. Third, those without Sp. Plant. number; with names in Linnaeus' handwriting; and no Fl. Suec. number, e. g., *L. chalybeiformis*. Fourth, those that have a seemingly erroneous Sp. Plant. number and name but an evidently authentic Fl. Suec. number correctly referring to Dillenius and diagnostically described by Linnaeus, e. g., *L. plicatus*. The remaining sheets, of which there are a large number (95), again fall into three classes. First, those that are named in Linnaeus' handwriting and are types of later species, which he described in Fl. Suec. 2 ed., 1755; Sp. Plant. 2 ed., 1763; Syst. Nat., 12 ed., 1767; and Mantissae 1 and 2, 1767 and 1771, e. g., *L. chrysophthalmus*. Second, those that were named by Linnaeus' son (Linn. fil.) in the latter's handwriting and represent types of his, published in Suppl. Pl. 1781, e. g., *L. capensis*. Third, those that were evidently added by the purchaser of the Linnean Herbarium, J. E. Smith, including species of J. Dickson, Swartz, Ehrhart, and other later workers, few if any of which constitute types.

The figure accompanying this article is of the two leaves of the MS. catalogue of the Linnean Herbarium giving the lichens in his handwriting "presumably compiled in the year 1755." The dot in front of the name indicated "such [plants] as were in the Herbarium." These accord well with the plants at present preserved in the herbarium, as a comparison will show. (I have placed dots in the printed list.) In a future paper on the Usneaceae I shall publish photographs of all the Usneaceae types.

Below is given the list of specimens that can be considered as authentic types printed in heavier types. In italics are placed those having less verifying data, which, however, can be properly considered types. All these are listed because they bear published Linnean names. Numbers in brackets were not given on the sheets, and the numbers following the names refer to Fl. Suec. Names underlined appear in Linn. fil. handwriting. The modern

* Through the kindness of Dr. S. H. Vines, of the Botanic Gardens, Oxford, Eng., I have seen the Dillenian types, a reference to which will be made in a later paper.

species conception in the family Usneaceae is given after each species.

- SPECIES PLANTARUM 1753
- [1.] scriptus
- ④ 4. *sanguinarium*
- [9.] *ventosus*
- ④ 11. *carpineus*
- ④ 12. *ericetorum* 936
- [13.] *candelarius*
- [14.] *tartareus*
- ④ [15.] *pallescent*
- [16.] *subfuscus*
- ④ 17. *upsaliensis*
- ④ 18. *centrifugus* 945
- ④ 19. *saxatilis* 946
- ④ [20.] *omphalodes*
- ④ 21. *olivaceus* 948
- ④ [22.] *fahlunensis*
- [23.] *stygius*
- ④ 25. *parietinus*
- ④ 26. *physod[es]** 951
27. *stellaris*
- ④ 28. *ciliaris* 952
- ④ 30. *islandicus* 959 = *Cetraria islandica* (L.) Ach.
- 30y. *islandicus* (*tenuissimus*) = *Coelocaulon aculeatum* (Schreb.) comb. nov.
- ④ 31. *nivalis* 958 = *Cetraria nivalis* (L.) Ach.
- ④ 32. *pulmonarius* 960
- ④ 33. *furfuraceus* 953
- ④ 35. *farinaceus* 957 = *Ramalina farinacea* (L.) Ach.
- ④ 36. *calicaris* 956 = *Ramalina scopulorum* (Retz.) Ach.
- ④ 37. *fraxineus* 955 = *Ramalina fraxinea* (L.) Ach.
39. *prunastri* 954
- ④ 40. *juniiperinus* [967]†
- [41.] *caperatus*
- ④ 42. *glaucus* 966
- ④ 44. *resupinatus*
- ④ 45. *venosus* (composite) 964.
- ④ 46. *aphtosus* 963‡
- ④ 47. *arcticus* 962
- ④ 48. *caninus*
- ④ 49. *croceus* 965§
51. *velleus* 968
- ④ 52. *pustulatus* 969
- ④ 53. *proboscideus*
- ④ 54. *deustus* 970
- [55.] *polyphyllus*
- [62.] *digitatus*
- [64.] *deformis*
- ④ 65. *rangiferinus* 980
- ④ 66. *uncialis* 979
- [67.] *subulatus*
- ④ 68. *paschalis* 982
- ④ 69. *fragilis* 983
- ④ 70. *Roccella*
72. *barbatus* = *Usnea articulata* (L.) Hoffmg.
- ④ 73. *jubatus* 986 = *Alectoria jubata* (L.) Ach.
- ④ 74. *lanatus*
- [75.] *pubescens* = *Alectoria pubescens* (L.) R. H. Howe, Jr.
- ④ 76. *chalybeiformis* = *Alectoria chalybeiformis* (L.) S. F. Gray
- ④ 77. *hirtus* [984]¶ (a composite)
- ④ 78. *vulpinus* = *Letharia vulpina* (L.) Wain.
- ④ 80. *floridus* = *Usnea florida* (L.) Web.
- 2 ED. FLORA SUECICA 1755
- [1102.] *saccatus*
- 2 ED. SPECIES PLANTARUM 1763
- [34.] *leucomelos*
- 12 ED. SYSTEMA NATURAE 1767
- [—.] *divaricatus* = *Letharia divaricata* (L.) Hue.
- 1ST MANTISSA 1767
- [82.] *peritusa*
- [84.] *Usnea* = *Ramalina usneoides* (Ach.) Fr.
- [88.] *horizontalis*
- [92.] *globifer[us]**
- [93.] *fascicularis*
- 2ND MANTISSA 1771
- [—.] *crocata*
- [—.] *chrysophthalmus* 32 Koeg. = *Teloschistes chrysophthalmus* (L.) Th. Fr.
- SYSTEMA VEGETABILUM—Murray 1774
- [—.] *Burgessii*
- SUPPLEMENTUM PLANTARUM 1781
- [—.] *capensis* = *Teloschistes flavicans capensis* Nyl.

* Two final letters not on label.

† This number is on a duplicate sheet no. 40, also, but the specimen is *Physcia parietina*.

‡ In Linn. personal note-correction an *h* is inserted = *aphtosus*.

§ Fl. Suec. no. on an attached sheet.

¶ Number *L. plicatus* in Fl. Suec.

Lichen	1 scriptus	71	41 caperatus
	2 geographicus		42 glaucus
	3 nigellus		43 aquaticus
	4 sanguinarius		44 resupinatus
	5 fusco-ater		45 venosus
	6 calcareus		46 apothecius
	7 atroviridis		47 arcticus
	8 atroalbus		48 caninus
	9 ventosus		49 croceus
	10 paginarius		50 minutus
	11 carpinus		51 retellus
	12 ericetorum		52 pustulatus
	13 islandicus		53 protuberans
	14 tartarus		54 densus
	15 pallidus		55 polyphyllus
	16 subfusus		56 polyrhizos
	17 upsalicensis		57 coccineus
	18 centrifugus		58 cornuopendens
	19 saxatilis		59 pyxidatus
	20 omphalodes		60 fimbriatus
	21 olivaceus		61 gracilis
	22 fallunensis		62 digitatus
	23 pygmaeus		63 cornutus
	24 cristatus		64 deformis
	25 parietinus		65 variegatus
	26 physodes		66 uncialis
	27 stellatus		67 subulatus
	28 ciliatus		68 paricholus
	29 cylindricus		69 fragilis
	30 islandicus		70 Roqueta
	31 nivalis		71 plicatus
	32 pulmonarius		72 barbatus
	33 furfuraceus		73 subulatus
	34 ampullaceus		74 lanatus
	35 farinaceus		75 pubescens
	36 isolicus		76 chalybeiformis
	37 fraxinarius		77 hirtus
	38 succiformis		78 vulpinus
	39 prunastri		79 arbutatus
	40 juniperinus		80 glaucus

At Burlington House I had also the opportunity to study a set of specimens which though probably not cotypes (perhaps in some cases topotypes) represent authentic Acharian material. These were mentioned by Dr. Asa Gray (Sill. Amer. Jour. Sci. and Arts 40: 8. 1841) as follows: "Here we find the cryptogamic collections of Acharius, containing the authentic specimens described in his works on the Lichens," On examining these I find them named by Acharius but without localities, and I therefore conclude that the specimens at Helsingfors (Universitetets Botaniska Institution, *fide* Dr. Fred. Elfving *in litt.*) where the localities (type) are given must constitute the true types. In De Candolle's work (La Phytographie 391. 1880) we find the following: "Acharius, Herb. de l'Univ. d'Helsingfors (Lasèque, Mus. Deless. 344 [1845]). Une série authent. de ses esp. dans l'herb. de la Soc. Linn. de Londres (A. Gray, Amer. Journ., Oct. 1840)." Through the kindness of Dr. Jackson, and with the permission of the Council of the Linnean Society I am able to throw the following light on the acquisition of this material by the society.

"Copy of Minutes of Linnean Society of London relating to the Lichens presented by E. Acharius

.....
"Council Minute, 21st May 1806

"Order'd, That a copy of the Transactions of this Society be presented to Dr. Acharius, F.M.L.S., upon his sending to the Society a Collection of specimens of lichens describ^d by him.

..... "13th June 1809

"Order'd that a Cabinet be provided to contain the Collection of Lichens presented to the Society by Professor Acharius: but that no greater expence be incurr'd on this Account than Five Pounds.

"General Minutes, 7th March 1809.

"A collection of Lichens from Sweden, describ'd in the Methodus Lichenum were presented from Dr. Acharius, F.M.L.S.

"Council Minutes, 17th November 1812

"Order'd that a copy of the Society's Transactions be presented to Dr. Acharius."

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